

Professor John S. Newman – Academic Family Tree

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Summary – The field of electrochemical engineering, especially the design and analysis of electrochemical systems, has greatly progressed due to the work of Professor John Newman at the University of California, Berkeley. We present the academic family tree of Professor John Newman comprising his students and their students, and a list of theses and dissertations he directed at UC Berkeley. Professor Newman has graduated 32 Masters and 43 PhD students, 15 of whom have gone on to become faculty members (Figure 1).

Biography – John Newman earned his BS in chemical engineering in 1960 from Northwestern University. While at Northwestern University, he was an engineering co-op student at Oak Ridge National Laboratory. Professor Newman entered the University of California, Berkeley for graduate study, obtaining his master's degree in 1962, on current distribution in porous electrodes, under the guidance of Professor Charles Tobias. In 1963, he obtained his doctorate on steady laminar flow past a circular cylinder at high Reynolds numbers. While a PhD student, he contributed to the preparation of major portions of the English edition of Levich's book, *Physicochemical Hydrodynamics*, published in 1962.

Shortly after receiving his doctorate, Newman joined the faculty at UC Berkeley and became a full professor in 1970, where he currently holds the Charles W. Tobias Chair in Electrochemistry. He won the Young Author's Prize for his work on current distribution on a rotating disk below the limiting current. In 1969, Dr. Newman again won the Young Author's Prize for his work with his student William Parish on modeling channel electrochemical flow cells. In 1985, he received the David C. Grahame Award of the ECS Physical and Analytical Electrochemistry Division. Prof. Newman's book, *Electrochemical Systems*, published in 1973, with a second edition in 1991, and a third in 2004 (with co-author Karen E. Thomas-Alyea), is used throughout the world as a monograph and graduate text in electrochemical engineering. He is an ECS Fellow and his other awards include the Henry B. Linford Award for Distinguished Teaching in 1990, the Olin Palladium Medal in 1991 and the Vittorio de Nora Award in 2008. He was associate editor for the *Journal of the Electrochemical Society* for 10 years starting in 1990.

Professor Newman is also a Faculty Senior Scientist and Principal Investigator in the Environmental Energy Technologies Division at Lawrence Berkeley National Laboratory, where he is in charge of the Batteries for Advanced Transportation Technologies program. In 2002, he spent a semester as the Onsager Professor at the Norwegian University of Science and Technology in Trondheim, Norway, and in 1999, was elected to the National Academy of Engineering.

Faculty Members of Newman Academic Family

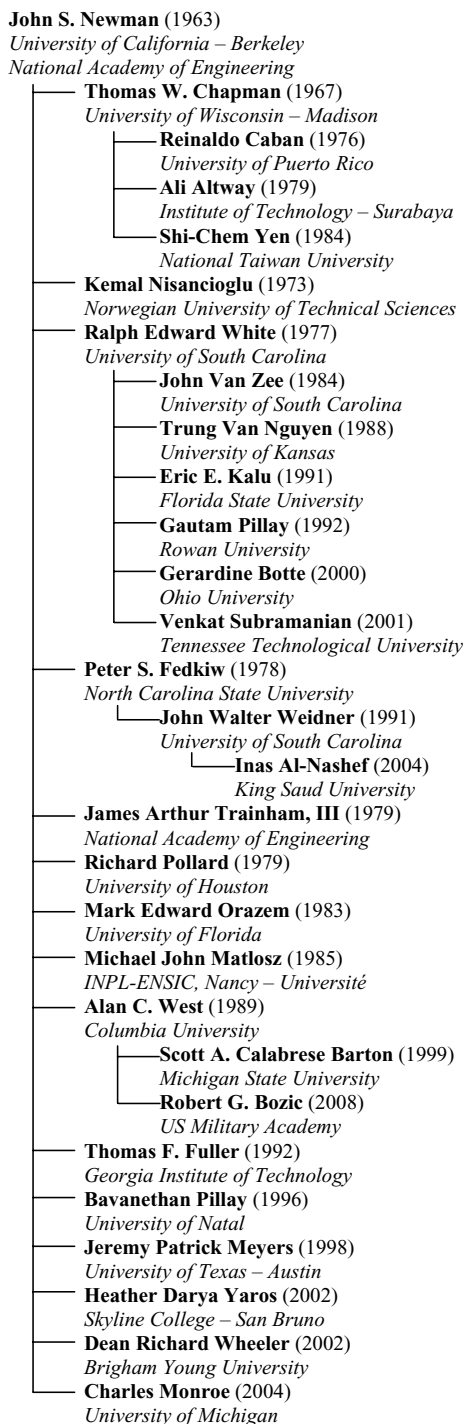


Figure 1: The Newman academic family tree comprising faculty members and their institutions. Year of graduation is indicated in parenthesis.

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